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SNOW SCALES ON FLORIDA CITRUS[1]

(HOMOPTERA: COCCIDAE)

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INTRODUCTION: CITRUS SNOW SCALE (UNASPIS CITRI (COMSTOCK)) (FIGS. 1, 2, 3, & 6) HAS BEEN KNOWN TO INFEST CITRUS SINCE 1880. THIS ARMORED SCALE WAS DESCRIBED BY PROFESSOR JOHN HENRY COMSTOCK, CORNELL UNIVERSITY, FROM SPECIMENS ON CITRUS IN LOUISIANA. IT WAS ALSO REPORTED ON CITRUS IN CUBA BY PROFESSOR COMSTOCK THE SAME YEAR.

H. G. HUBBARD, SPECIAL AGENT, USDA, STATIONED AT CRESCENT CITY, FLORIDA, FROM 1881 TO 1884, DEVOTED MOST OF HIS TIME DURING THE FOUR YEARS TO INVESTIGATIONS OF THE INSECTS AFFECTING THE ORANGE AND OTHER PLANTS OF THE CITRUS FAMILY. IN HIS PUBLICATION, "INSECTS AFFECTING THE ORANGE," RELEASED IN 1885, THE ORANGE CHIONASPIS (CITRUS SNOW SCALE) WAS FIRST REPORTED ON CITRUS IN FLORIDA. THE LATE G. F. FERRIS, SCALE SPECIALIST, STANFORD UNIVERSITY, CONSIDERED CITRUS SNOW SCALE TO BE AN INTRODUCED SPECIES FROM THE ORIENT.

LESSER SNOW SCALE (PINNASPIS STRACHANI (COOLEY)) (FIG. 4) AND FERN SCALE (PINNASPIS ASPIDISTRAE (SIGNORET)) (FIG. 5) ARE OCCASIONALLY FOUND ON CITRUS IN FLORIDA AND MAY BE MISTAKEN FOR CITRUS SNOW SCALE. THE MALE PRE-ADULT ARMOR OF THE THREE SPECIES IS SUPERFICIALLY SIMILAR IN SIZE, SHAPE AND COLOR. FEMALES OF THESE SPECIES ARE OYSTERSHELL-SHAPED. CITRUS SNOW SCALE MAY BE FOUND ON THE TRUNK, LIMB, TWIG, LEAF, AND FRUIT OF CITRUS. THE LESSER SNOW SCALE IS USUALLY FOUND ON TWIGS AND LEAVES OF CITRUS NURSERY STOCK, AND FERN SCALE IS USUALLY CONFINED TO THE LEAF OF CITRUS. THE MALES OF FERN SCALE ARE FOUND IN SMALL PATCHES ON THE LEAF (FIG. 5).

DISTRIBUTION: CITRUS SNOW SCALE HAS BEEN REPORTED FROM THE FOLLOWING COUNTIES IN FLORIDA: BAKER, BREVARD, HILLSBOROUGH, INDIAN RIVER, LAKE, MANATEE, MARTIN, ORANGE, OSCEOLA, PASCO, POLK, PUTNAM, SEMINOLE, ST. LUCIE, AND VOLUSIA. LESSER SNOW SCALE AND FERN SCALE ARE COMMON THROUGHOUT FLORIDA ON MANY DIFFERENT HOSTS.

HOSTS: CITRUS SNOW SCALE IS APPARENTLY CONFINED TO CITRUS SPP. IN FLORIDA. LESSER SNOW SCALE AND FERN SCALE HAVE A WIDE HOST RANGE.

ECONOMIC IMPORTANCE: CITRUS SNOW SCALE IS BECOMING MORE WIDELY DISTRIBUTED IN FLORIDA. IT IS DIFFICULT TO DETECT LIGHT INFESTATIONS ON NURSERY STOCK, PARTICULARLY WHEN THE DEVELOPING MALE SCALE IS ABSENT. AS A RESULT, THIS SPECIES HAS BEEN INADVERTENTLY DISTRIBUTED IN THE STATE. AN INTENSIVE SURVEY OF ALL CITRUS-PRODUCING COUNTIES OF FLORIDA WAS INITIATED IN 1964 WHEN NEW CITRUS PLANTINGS IN ST. LUCIE AND INDIAN RIVER COUNTIES WERE FOUND INFESTED WITH CITRUS SNOW SCALE. CITRUS SNOW SCALE IS NOW AN ECONOMIC PEST IN THE FOLLOWING COUNTIES: LAKE, ORANGE, POLK, SEMINOLE, ST. LUCIE, AND VOLUSIA. LESSER SNOW SCALE AND FERN SCALE ARE NOT ECONOMIC PESTS OF CITRUS IN FLORIDA. SEE REVERSE SIDE OF CIRCULAR FOR A KEY TO SPECIES OF SNOW SCALE ON FLORIDA CITRUS.

FIG. 1. CITRUS SNOW SCALE ♂ AND ♀ ON CITRUS LEAF (NATURAL SIZE)

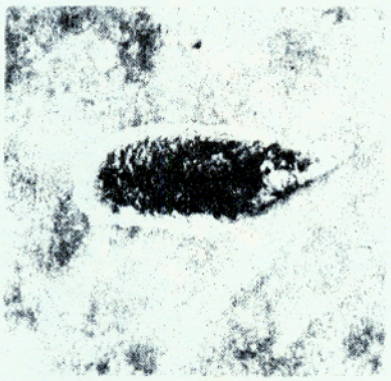

FIG. 2. CITRUS SNOW SCALE FEMALE (♀) (X20)

FIG. 3. CITRUS SNOW SCALE MALE (♂) (X25)

[1]CONTRIBUTION NO. 63, ENTOMOLOGY SECTION